

Parcel E-2 Remedial Action Update

Hot Spot Delineation and Excavation

Hunters Point Naval Shipyard BCT Meeting

3/27/2014

Presentation Outline



- **Focused Biological Surveys**
- **Hot Spot Areas – Site Wide Layout & Shoreline Seep Area**
- **Reactive Core Mat Installation**
- **Pre-Excavation Characterization**
- **Additional Field Activities**
- **Schedule Update**

Focused Biological Surveys (2004 and 2014)



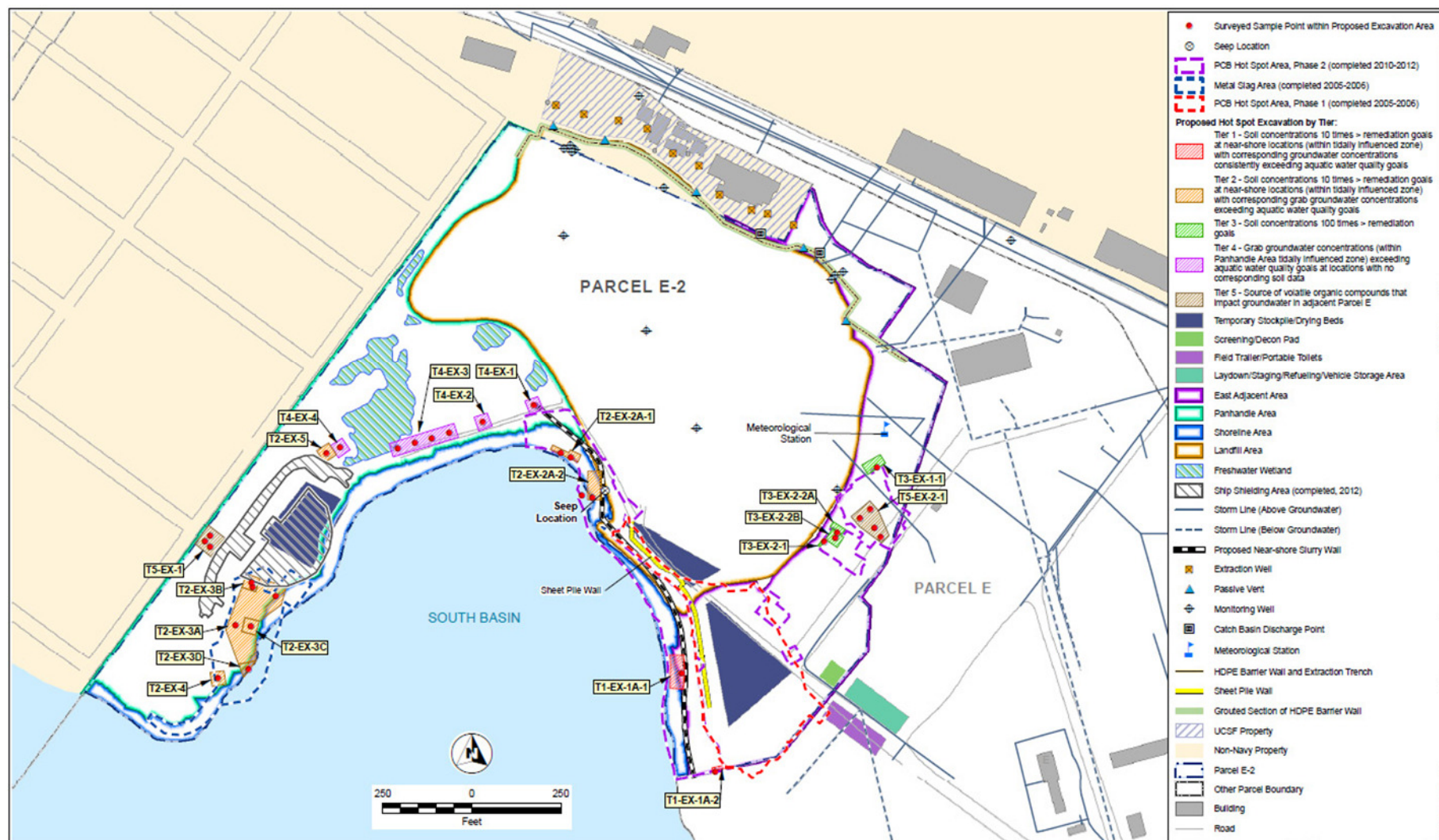
- On February 18, 2004, a focused biological survey was conducted to determine habitat potential for special status species of wildlife and to make observations of any that were present to aid in determination of applicable or relevant and appropriate (ARAR) for Parcel E-2.
- In February 2014 and March 2014, pursuant to the Record of Decision ARARs for Parcel E-2, and as specified in the Parcel E-2 Design Basis Report, a focused biological survey was performed in areas that may be affected by remediation activities. The focused biological survey was conducted with the following objectives:
 - Identify potential bird species that are protected under the Migratory Bird Treaty Act (16 United States Code § 703) and California Fish and Game Code § 3511 and, if such species are present, specify reasonable measures to ensure that there are adequate protection during implementation of the remedy.
 - Determine the extent to which the wetlands restoration at the adjacent property (Yosemite Slough Restoration Project) may have attracted endangered or fully protected bird, mammal, amphibian, or reptile species (as identified in pertinent sections of the California Fish and Game Code) to areas of Parcel E-2 that may be affected during implementation of the remedy and, if such species are present, specify reasonable measures to ensure their adequate protection.

Focused Biological Surveys

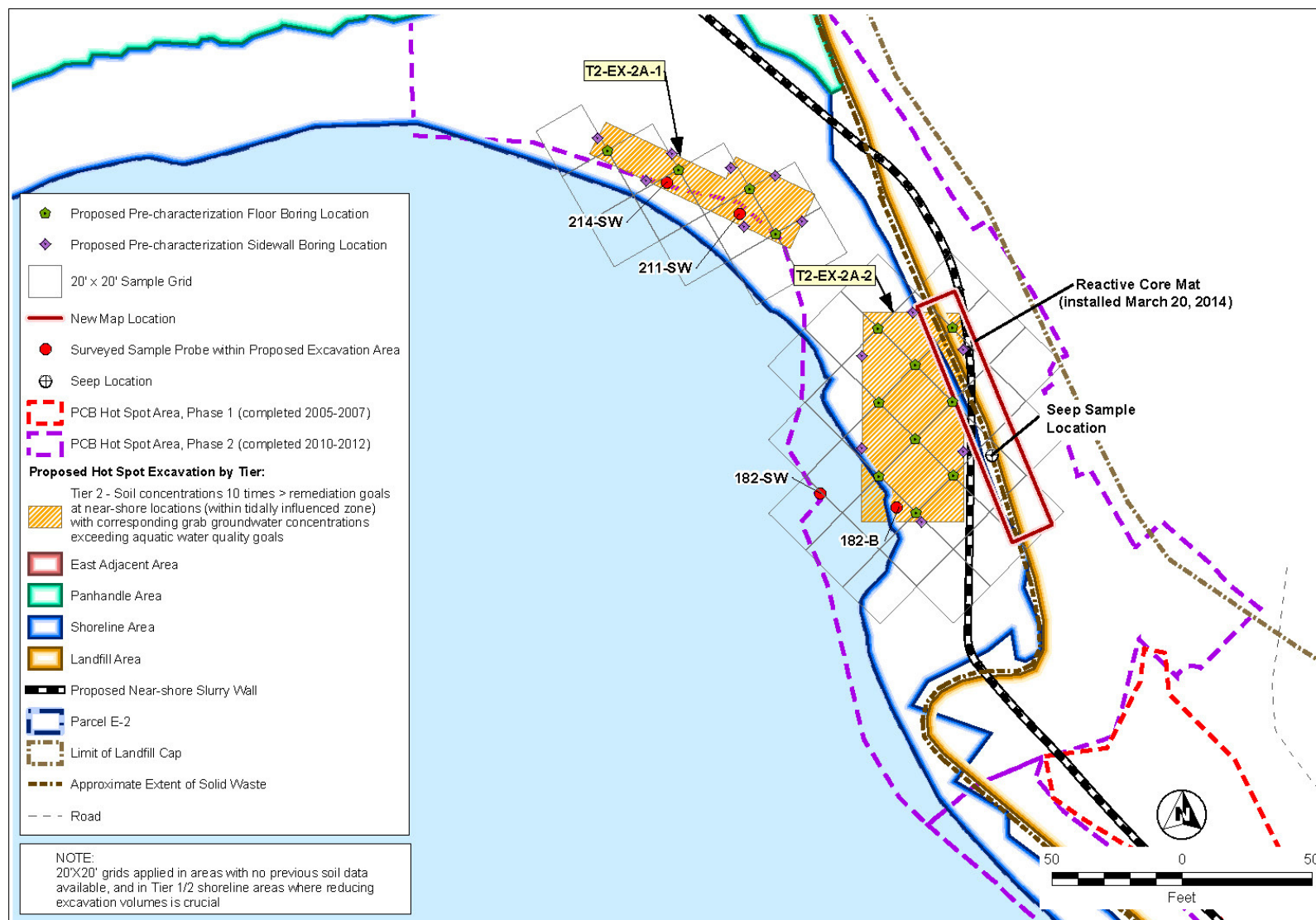


- During the 2004 general biological survey, the main species of wildlife that were evaluated for their presence were Salt marsh harvest mouse (*Reithrodontomys raviventris*) and Western burrowing owl (*Athene cunicularia*).
- From February-March 2014, four separate avian surveys were conducted for all bird species, with a focus on the presence of California clapper rail (*Rallus longirostris obsoletus*).
- No sensitive wildlife or vegetative species were observed during any of the five biological surveys.
- The project likely will not result in any impacts to special status species protected under state and federal endangered species regulations.
- A field biologist will be on-site to perform ongoing observation of all mechanized and/or intrusive work performed as part of the remedial action.

Hot Spot Areas – Site Layout



Shoreline Seep Area



Reactive Core Mat Installation



- Installed 15' x 25' Reactive Core Mat (RCM) over original shoreline seep location on July 24, 2013.
- Installed ~1,500 square feet of RCM (2 pieces, each 15' x 50') the week of October 7, 2013, over 2 additional areas of seepage to the northwest of original location.
- Small section of exposed RCM noted during weekly inspection on February 6, 2014, and slumping of an RCM section noted during inspection on March 4, 2014, following a series of storms.
- Biological surveys were ongoing through February-March, and no sheen noted within shoreline seep area, therefore installation of additional RCM delayed until completion of biological surveys.
- Biological surveys were completed on March 12, 2014.

Reactive Core Mat Installation (cont.)



- Following receipt of biological survey findings, existing RCM was restaged and additional ~1,500 foot section of RCM installed the week of March 17, 2014.
- Pre-excavation characterization samples for excavation T2-EX-2A-2 were collected prior to mat installation, to preclude need to drill through RCM following installation.
- RCM placed via long-reach excavator with edges buried in shallow anchor trenches.
- Corners of RCM attached to t-posts driven into sand, to prevent future slumping.
- Crane mats utilized to allow excavator access to beach areas.
- RCM covered with a minimum of 12" clean imported sand.
- Ongoing visual inspections to be performed on seepage area and RCM as part of remedial action.

Reactive Core Mat Installation – Previously-Installed Mat



Reactive Core Mat Installation - Previously-Installed Mat



Reactive Core Mat Installation – New RCM



Reactive Core Mat Installation – New RCM



Reactive Core Mat Installation – New RCM



Reactive Core Mat Installation – New RCM



Reactive Core Mat Installation – New RCM



Reactive Core Mat Installation – New RCM



Reactive Core Mat Installation – New RCM



Pre-Excavation Characterization



- **Pre-excavation characterization sidewall samples will be collected at a minimum frequency of one sample per 50 linear feet of proposed excavation sidewall length (or fraction thereof), and one sample for every 5 vertical feet of proposed excavation sidewall depth.**
- **Pre-Excavation Characterization floor samples will be collected at either 1 sample per 400 ft² or 1 sample per 900 ft².**
 - **1 per 400 square feet (20' x 20' grid) in all Tier 1 excavations, and Tier 2 excavations adjacent to the landfill (T2-EX-2A-1 and T2-EX-2A-2)**
 - **1 per 400 square feet (20' x 20' grid) in all Tier 4 excavations**
 - **1 per 900 square feet (30' x 30' grid) in all Tier 3 excavations, Tier 5 excavations, and Tier 2 excavations in the Panhandle Area.**
 - **Floor samples will be collected from the 6" of soil column below the proposed excavation depth (e.g., excavations proposed at 3' bgs will have floor samples collected from 3'-3.5' bgs).**
 - **An additional sample will also be collected from 3' above the bottom sample.**
 - Excavation depths were placed 2.5' below deepest contamination exceeding hot spot goals.

Pre-Excavation Characterization



Pre-Excavation Characterization



Pre-Excavation Characterization



Additional Field Activities



- **Rehabilitation of Radiological Screening Yards pads to begin following removal of existing soil stockpiles, early April.**
- **Utility location performed on work areas on March 19, 2014.**
- **Drilling and sampling scheduled to begin week of March 31, 2014.**
- **Turbidity curtain scheduled to be installed August 2014.**

Parcel E-2 Hot Spot Remedial Action

Submit Draft E-2 Hot Spot RAWP	Dec 20, 2013
BCT Comments Due	Feb 6, 2014
Submit Final E-2 Hot Spot RAWP	Apr 3, 2014
Pre-Excavation Characterization	Mar 18 – May 7, 2014
Submit Draft Characterization Tech Memo to BCT	July 21, 2014
Hot Spot Excavation	Sep 15 – Mar 17, 2015
Draft Hot Spot RACR	June 26, 2015
Final Hot Spot RACR	Oct 15, 2015